

**Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

Claim 1. (canceled)

Claim 2. (canceled)

Claim 3. (canceled)

Claim 4. (canceled)

Claim 5. (canceled)

Claim 6. (canceled)

Claim 7. (previously presented) A method of determining the gas pore pressure of a drill cutting sample, comprising:

- a. passing a grinded sample having fine particles, the grinded sample being obtained by grinding a drill cutting sample taken from an earth drilling process, through a first sieve having a first size;
- b. calculating a statistic average of a mass weight of the grinded sample which passes through the first sieve;
- c. receiving the grinded sample in a container;
- d. receiving a liquid in the container, the liquid covering the grinded sample to an initial liquid level at an initial pressure;
- e. adding or subtracting liquid to produce a bubble or vary the size of a bubble of gas within the sample;
- f. measuring the size of the bubble and the pressure; and
- g. calculating the gas pore pressure.

Claim 8. (currently amended) The method of claim 7, further comprising calculating a volume based on a spherical bubble and further comprising determining the an emission from the formula  $\text{Emission} = \text{Volume} / \text{Pressure}$  emission = volume / pressure.

Claim 9. (previously presented) The method of claim 7, steps e-g repeated for a subsequent bubble after the initial bubble.

Claim 10. (previously presented) The method of claim 7, steps e-g repeated for a subsequent liquid level after the initial liquid level.

Claim 11. (previously presented) The method of claim 10, wherein the subsequent liquid level is higher than the initial liquid level.

Claim 12. (previously presented) The method of claim 10, wherein the subsequent liquid level is lower than the initial liquid level.

Claim 13. (previously presented) The method of claim 7, the pressure being atmospheric pressure.

Claim 14. (previously presented) The method of claim 7, step a repeated, passing the grinded sample through a second sieve, the second sieve having a second size which is smaller than the first size.

Claim 15. (previously presented) The method of claim 14, step a repeated, passing the grinded sample through a third sieve, the third sieve having a third size which is smaller than the second size.

Claim 16. (previously presented) The method of claim 15, wherein the size of the bubble is measured by relative comparison of the bubble diameter to the first size of the first sieve.

Claim 17. (previously presented) The method of claim 7, wherein the size of the bubble is measured by relative comparison of the bubble diameter to the second size of the second sieve.

Claim 18. (previously presented) The method of claim 7, wherein the size of the bubble is measured by relative comparison of the bubble diameter to the third size of the third sieve.

Claim 19. (previously presented) The method of claim 7, wherein the size of the bubble is measured by the measurement of the bubble diameter by microscope.

Claim 20. (previously presented) The method of claim 7, the container being a test tube.

Claim 21. (previously presented) The method of claim 7, the liquid being a substantially clear liquid.

Claim 22. (canceled)

Claim 23. (previously presented) The method of claim 9, wherein steps e-g are repeated a plurality of cycles, to determine an error correction and standard deviation.

Claim 24. (previously presented) The method of claim 10, wherein steps e-g are repeated a plurality of cycles, to determine an error correction and standard deviation.